

**BUREAU OF LAND MANAGEMENT  
PHOENIX DISTRICT OFFICE / HASSAYAMPA FIELD OFFICE  
ENVIRONMENTAL ASSESSMENT  
REVIEW AND APPROVAL**

<b>Proposal:</b> Mineral Materials Sale under 43 CFR 3600			
<b>Land Description:</b> T. 7 N., R. 2 E., Section 5 portions of the NE $\frac{1}{4}$ NW $\frac{1}{4}$ , NW $\frac{1}{4}$ NE $\frac{1}{4}$ , G&SRM, Arizona T. 8 N., R. 2 E., Section 32 portions of the SW $\frac{1}{4}$ SE $\frac{1}{4}$ , G&SRM, Arizona			
<b>Applicant:</b> Arizona Natural Gold Excavation and Reclamation Inc.			
<b>Type of Case:</b> Mineral Materials		<b>Serial #:</b> AZA-32842	
<b>EA Number:</b> AZ-210-2005-017		<b>Activity:</b> 1330	<b>EA Assigned to:</b> Jeff Garrett & Dave Eddy
<p>Coordination: Indicate in the left column which disciplines were analyzed in the EA and print the name of the individuals who participated in the first column on the right. Author's name should be used if author analyzed the impacts. Place an asterisk in the second column on the right to indicate that written comments have been provided during clearance. If changes were made to the recommended mitigation, the appropriate specialist will initial this column to show concurrence.</p>			
<b>NEEDED INPUT (x)</b>	<b>DISCIPLINE</b>	<b>TEAM INPUT &amp; REVIEW</b>	<b>*</b>
X	<b>Lands</b>	Jim Andersen	
	<b>Minerals</b>		
X	<b>Range</b>	Lee Higgins	
	<b>Burros</b>		
X	<b>Planning/Environmental</b>	Dave Eddy	
X	<b>Cultural &amp; Paleontological</b>	Cheryl Blanchard	
	<b>Wilderness</b>		
	<b>Soil</b>		
	<b>Water</b>		
X	<b>Air Quality</b>	Dave Eddy	
X	<b>Wildlife</b>	Tim Hughes	
X	<b>T&amp;E Plants</b>	Tim Hughes	
X	<b>Recreation/VRM</b>	Jack Ragsdale	
	<b>Socio-Economics</b>		
	<b>ACECs</b>		
<b>Author:</b> David Eddy		<b>Date</b>	

## **Finding Of No Significant Impact (FONSI)**

### **Arizona Natural Gold Excavation and Reclamation, Inc., Mineral Materials Sale Environmental Assessment AZ-210-2005-017**

**Finding of No Significant Impact:** Based on the analysis of potential environmental impacts contained in the attached environmental assessment, I have determined that impacts are not expected to be significant and an environmental impact statement is not required.

**Rationale for Finding of No Significant Impact:** As per 40 CFR 1508.27 (setting forth consideration for determination of the “significance” of impacts), the proposed action and no action alternatives have been analyzed with respect to the context and intensity of environmental impacts on regional and local interests. Both beneficial and adverse impacts have been considered. Potential adverse effects would be limited to acceptable levels by standard operating procedures and the inclusion of resource-specific mitigation measures where appropriate. The proposed action and no action alternative will not affect public health, public safety, or unique historic or cultural resources of the area; do not establish a precedent, or represent a decision in principle about a future consideration; are not related to any other proposed action representing cumulatively significant effects; and the supporting data and attendant analysis are not expected to be controversial. No cultural sites listed or eligible for listing in the National Register of Historic Places, or any threatened or endangered species or critical habitat for such species, will be adversely impacted. The proposed action and no action alternative are consistent with Federal, State and Local laws.

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Hassayampa Field Manager

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Date

ARIZONA NATURAL GOLD EXCAVATION AND RECLAMATION  
Mineral Materials Sale  
Environmental Assessment

U.S. Department of the Interior  
Bureau of Land Management  
Phoenix District Office / Hassayampa Field Office  
Arizona

Maricopa County, Arizona

Environmental Assessment  
**AZ-210-05-017**

**SEPTEMBER 2005**

Environmental Assessment  
Arizona Natural Gold Excavation and Reclamation Mineral Materials Sale

## INTRODUCTION

Purpose and Need. Arizona Natural Gold, hereafter known as the applicant, is requesting a mineral materials sale under 43 CFR 3600 for 250,000 tons of material (mostly boulders) from lands located in T. 8 N., R. 2 E., Section 32, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ , and T. 7 N., R. 2 E., Section 5, NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ , G&SRM, Arizona, (Figure 1) hereafter known as the subject lands. The purpose of this environmental assessment is to analyze the impacts of the applicant's proposal in accordance with procedures established pursuant to the National Environmental Policy Act (NEPA).

The BLM is considering issuing an initial mineral materials sale contract for 50,000 tons of boulder-sized material, to be severed from the subject lands. If the material can be successfully marketed, the applicant may request subsequent sales from the same location, mining up to 250,000 tons over a three to five year period. Portions of the subject lands contain existing disturbance (approximately 1.5 acres) related to previous mining activities (Figure 2). The first phase of the operation will disturb approximately 3 acres, which includes the previously disturbed acreage. Reclamation will occur concurrently with mine expansion. As one acre is disturbed the previously mined acre will be reclaimed. The project has the potential to expand to disturb a total of 30 acres. The proposed sale will provide a source for rock and boulders to be utilized for various decorative rock purposes in the Phoenix Metropolitan area.

The subject lands are Federal surface / Federal minerals. As a result of this environmental analysis, mitigating measures in the form of stipulations will be developed as required, and if the proposal is approved, applied to the permit. These stipulations are listed in Appendix A.

## CONFORMANCE WITH LAND USE PLAN

The proposed action is in conformance with the Phoenix Resource Management Plan and Final Environmental Impact Statement decision dated August 29, 1989. The plan states on page 14:

“Sales of mineral materials to the public would continue to be administered on a case-by-case basis under regulations in 43 CFR 3600.”

The proposed action is also consistent with direction provided through the Metropolitan Phoenix Mineral Materials Program Guidelines, dated January 1995 which states that the Phoenix District Office will effectively meet public demand for mineral materials through the use of program guidelines in conformance with BLM policy and regulations.

It is BLM's policy to make mineral materials available unless it is detrimental to the public interest to do so.

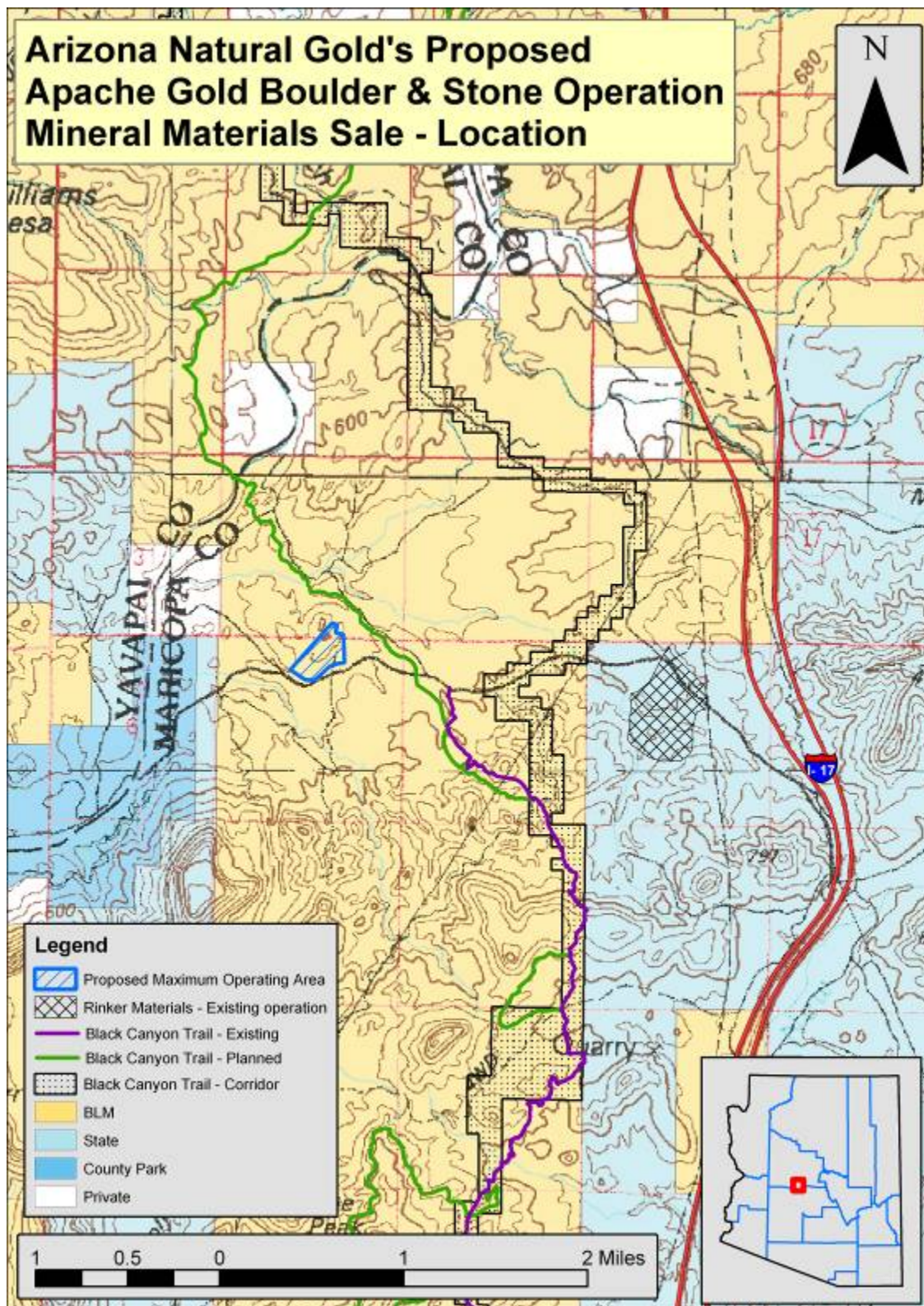


Figure 1. Map showing location of proposed project relative to other features in the southern Black Canyon corridor area.



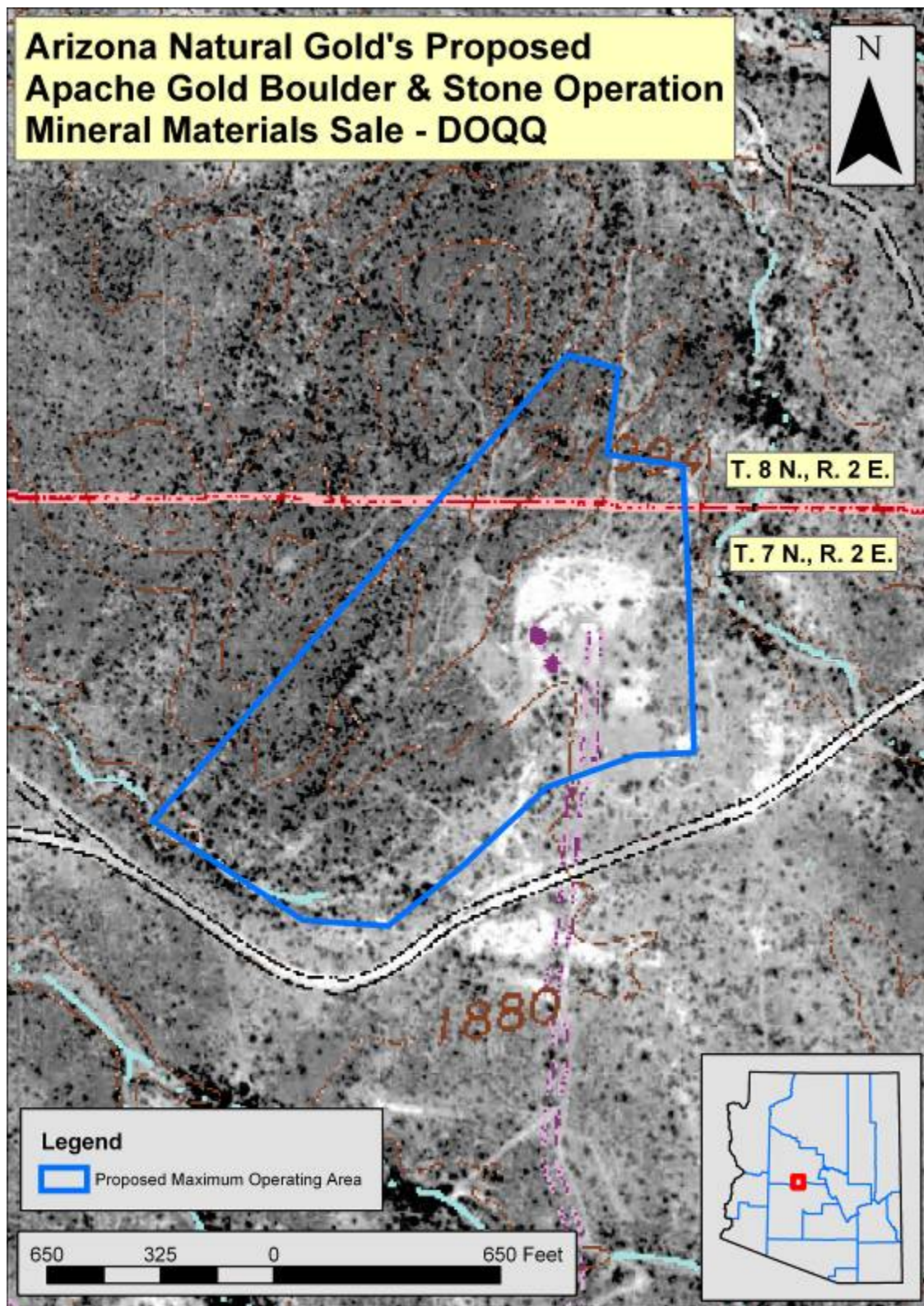


Figure 2. DOQQ (digital orthophoto quarter quad) showing area within the proposed maximum operation boundaries and existing disturbances.

## DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

### **ALTERNATIVE A**

Proposed Action. The proposed action is to remove a total 250,000 tons of jasperoid boulders in three phases, over a period of three to five years from the following lands (Figure 1) which are Federal surface / Federal minerals and are administered by the Hassayampa Field Office of the Phoenix District, Bureau of Land Management (BLM):

Gila & Salt River Meridian, Maricopa County, Arizona  
T. 8 N., R. 2 E., Section 32, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ ,  
T. 7 N., R. 2 E., Section 5, NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$   
(Approximately 30 acres)

The proposal as outlined in the submitted Mining and Reclamation Plan for Arizona Natural gold Excavation and Reclamation, dated October 12, 2004 and amended December 30, 2004 (Appendix B), includes allowing placement on site of ancillary equipment and facilities such as crushers, conveyors, screens, scales, stockpiles, required sanitary facilities, and temporary buildings for administrative activities.

The proposed operations include mining of material through the use of heavy equipment and where necessary, drilling and blasting of rock. The larger fraction of material will be sold as "pit run" boulders with some other material potentially being processed on site using a series of crushers, screens, and conveyors that will transport the finished product to various stockpiles. The material will then be loaded onto haul trucks for transport to the point of use or sale.

On site facilities may include equipment and parts storage, maintenance facilities, portable buildings for use as an office and/or part-time residence for a guard or caretaker, and sanitation facilities for the employees. All residential habitations and facilities will be required to conform to applicable state, county, and local laws and ordinances governing such facilities.

Hazardous materials expected to be on site are primarily petroleum products required for the operation and maintenance of equipment but may also include some solvents and other chemicals used for maintenance purposes. All hazardous materials will be handled, stored, and disposed of in accordance with applicable safety and environmental laws and regulations. Actions to prevent any spillage of chemicals or petroleum products will be instituted.

Plant species of concern will be addressed in accordance with applicable state regulations and required permits will be obtained prior to removal or relocation. A plant nursery will be maintained on site for transplanted trees and cactus until needed for reclamation. Existing laws and regulations regarding antiquities and threatened & endangered species will be adhered to. An Archaeological Survey of the subject lands did not identify any sites of potential significance. Any topsoil and overburden material will be stockpiled for later use during reclamation. Water for dust control and domestic use will be obtained from a well located on site. It is anticipated that approximately 4000 gallons of water per day will be needed, mostly for dust control.

It is anticipated that approximately eight vehicles will be accessing the site on a daily basis, five days a week. Approximately two cars, two pickup trucks and 4 semi-truck boulder hauling flatbeds or dump trucks for crushed material will use the main access road on a daily bases. Access to the mine site will use existing county maintained roads. Where needed, roads will be upgraded to county specifications, which may include crowning with decomposed schist from the subject lands. The applicant will apply water to the roadways as necessary to assist in dust suppression. Rate of application will depend on amount of traffic, road condition, and weather. The applicant will be required to obtain Air Quality Permits as necessary from Maricopa County which will set forth requirements for pollution and particulate controls at the mine site.

The site's operating hours will be Monday through Friday, eight hours per day, with no truck traffic on weekends because of the multi-use recreational nature of Table Mesa road and the Lake Pleasant access route.

Upon ultimate completion of all mining operations, equipment will be removed. Reclamation will be occurring concurrently with mining. As one area is depleted of resources it will be reclaimed. At the completion of operations all disturbed areas shall be ripped and scarified to eliminate compaction and to prepare the surface for reseeding. A seed mixture suitable for the subject lands will be developed by the BLM. Plants removed and transplanted to the nursery will be returned to previously disturbed areas as needed. Slopes will be put back at a 2.5:1 or less slope and any excess material will be used to backfill the pit. A reclamation bond will be required which will be sufficient to cover reclamation costs in the event that the applicant is unable to fulfill their contractual obligations at any time. The area shall be reclaimed in accordance with the Arizona Natural Gold's Mining and Reclamation Plan, reclamation guidelines as found in the Metropolitan Phoenix Mineral Materials Program Guidelines, 1995 and BLM Manual Handbook H-3041-1, Solid Minerals Reclamation Handbook.

## **ALTERNATIVE B**

No Action - The no action alternative will deny the application to mine Federal mineral material from the subject lands.

### **AFFECTED ENVIRONMENT**

General Setting - The subject lands are situated in the northeastern part of the Sonoran Desert within the rugged "Transition Zone" which in central Arizona separates the Basin and Range physiographic province from the Colorado Plateau. Geologically the area includes metamorphic rocks of Proterozoic age (Xgs & Xrm on Figure 3) along with Cenozoic volcanics (Tb) and sediments (Ttc, Tc, Qtc, & Qpg) (Bryant, 1999). The material of interest is represented on the geologic map as metachert pods within the metamorphic schist (Xbm).

The area experiences climatic conditions typical of the arid southwestern United States; these conditions are characterized by hot, dry summers and mild winters. The average maximum daily temperature is approximately 105°F in July and 65°F in December.



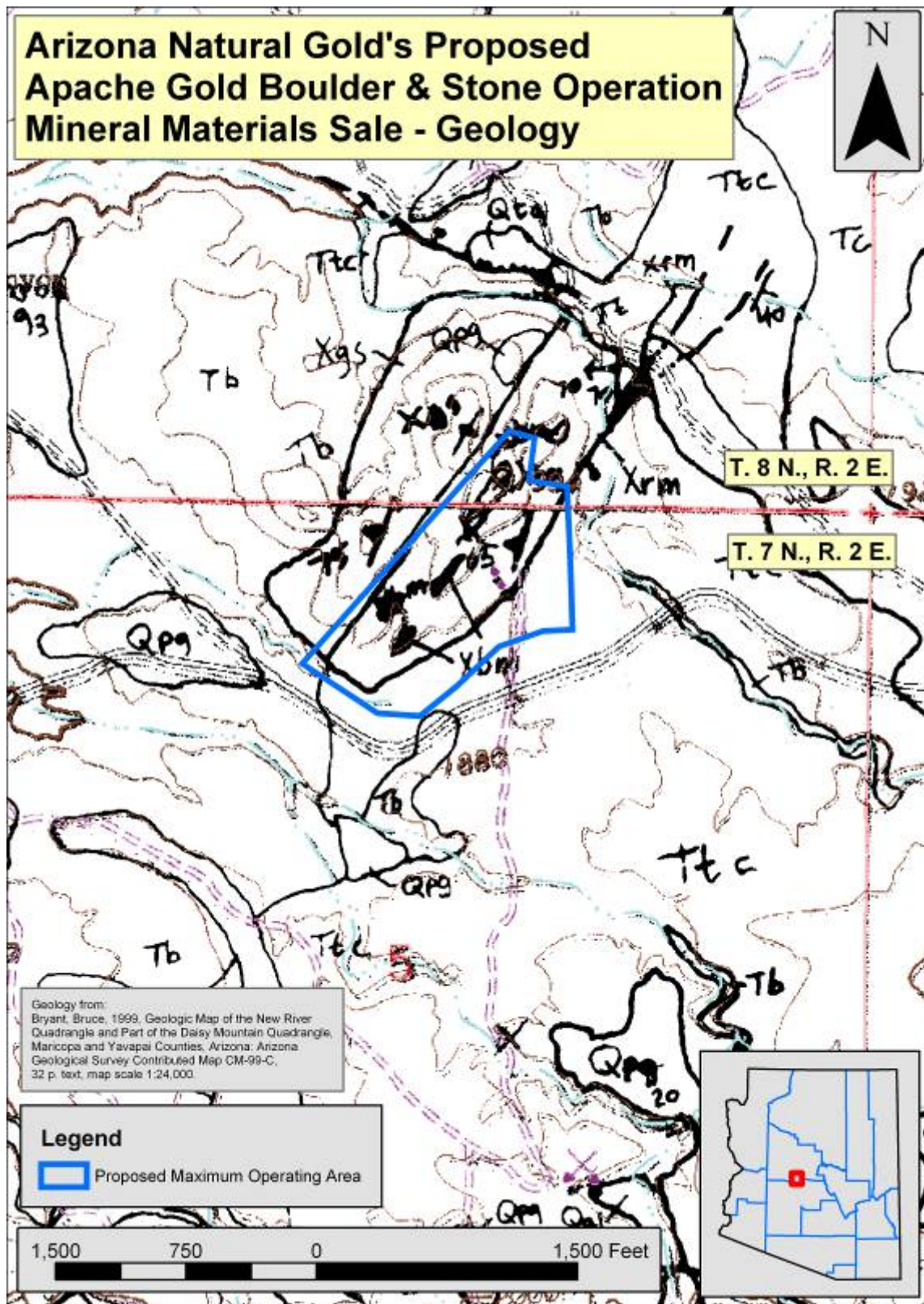


Figure 3. Geologic map of the area in the vicinity of the proposed operation (Bryant, 1999); see text for unit names and descriptions.

The legal description is: T. 8 N., R. 2 E., Section 32, SW¼SW¼SE¼ (part), and T. 7 N., R. 2 E., Section 5, NW¼NE¼NE¼ (part), G&SRM, Maricopa County, Arizona (approximately 30.0 acres). Maximum elevation on the site is approximately 1994 feet above sea level.

Presently, access to the subject lands can be reached via U.S. Interstate Highway 17, exiting at the Table Mesa Interchange, and proceeding north-northwest approximately 3 miles along a county maintained road (Figure 1).

Portions of the site are degraded due to previous human caused impacts such as, target (recreational) shooting, Off-Highway Vehicle (OHV) use, trash dumping, and past mining activities. However, some portions remain diverse and pristine.

Wildlife, Botanical and T&E - The vegetation in the project area consists of Arizona Upland, Sonoran Desert scrub, dominated by triangle-leaf bursage, creosote bush and foothills palo verde trees. Other plant species present include, but are not limited to, range ratany, cat-claw acacia, ironwood, mesquite, saguaro cactus, stag horn cholla, various other cacti, shrubs and grasses. Wildlife species that occur in the area include mule deer, Gambel's quail, desert cottontails, coyotes, ground squirrels, and various small mammals, reptiles, and resident and migratory birds.

The area contains no suitable habitat for any listed or proposed threatened, endangered or candidate species of plant or wildlife. A survey of the project area indicates it is not occupied by any special status plant or wildlife species including desert tortoise.

Cultural Resources - A review of the federal and state inventories and maps indicates that there are no listed properties within the potential impact area of this action.

A cultural survey conducted on the affected lands revealed no significant cultural sites. A few isolated occurrences of cultural remains were recorded. No historic properties were identified within the subject lands.

Water Quality – Depth to ground water is sixty-two feet. The groundwater is generally suitable for most agricultural and industrial uses. Groundwater in Arizona is not appropriated. It is owned by the state and use is authorized through a permit process with Arizona Department of Water Resources (ADWR).

The subject lands are surrounded by several washes and tributaries which generally have flow only after storms that produce intense or prolonged rainfall; several years may pass between substantial stream flows. Stream flow after storm activity is generally of short duration, with much of the water percolating into the sandy stream bed substrate.

Rainfall averages 9.5 inches annually and can be substantially more in the surrounding mountains. Two distinct seasonal periods of precipitation occur in the region. During the winter, Pacific storms produce prolonged rainfall of moderate intensity. Approximately 50% of the annual rainfall is associated with winter seasonal storms from November to April. The other period of rainfall is the summer monsoons which generally last from July through September.

Air Quality - The climate of the subject lands is characterized by moderate precipitation, dry winds and generally warm temperatures. In winter the average temperature is 49 degrees Fahrenheit with intermittent thunderstorms. In summer the average temperature is 84 degrees Fahrenheit. The region experiences a high percentage of sunshine and low humidity. Strong, dry, dusty winds with gusts as much as 75 miles per hour may occur at times in summer and winter months.

Air quality management in Arizona is governed by the Federal Clean Air Act (CAA), which is implemented by the U.S. Environmental Protection Agency (EPA) and adopted by the State of Arizona. A variety of emission sources contribute to current particulate matter problems in the area. The Arizona Department of Environmental Quality (ADEQ) and the Maricopa County Environmental Services, Department of Air Pollution Control (APC), oversee air quality planning and control throughout Maricopa County.

Air quality is frequently evaluated in terms of concentrations of the six federally defined criteria pollutants. These criteria pollutants are: particulates less than 10 microns (PM<sub>10</sub>), carbon monoxide (CO), ozone (O<sub>3</sub>), Sulfur dioxide (SO<sub>2</sub>), Nitrogen dioxide (NO<sub>2</sub>), and lead (Pb). Health-based standards for ambient concentrations of these pollutants, National Ambient Air Quality Standards (NAAQS), have been defined by EPA and adopted by the state of Arizona.

In 1995, federal standards for O<sub>3</sub>, Particulate Matter<sub>10</sub> (PM<sub>10</sub>), and carbon monoxide (CO), were violated in Maricopa County. The subject lands are located within the pollutant nonattainment area for CO, O<sub>3</sub>, and PM<sub>10</sub>. The nonattainment status of the area is classified as "serious" for CO, O<sub>3</sub>, and PM<sub>10</sub>. Ozone precursor pollutants and CO emissions stem primarily from vehicle traffic associated with urban development. A variety of emission sources contribute to current particulate matter problems in the nonattainment area. Major contributors to particulate matter problems include agricultural activities, dust resuspended by vehicle traffic on unpaved roads, construction and demolition, and aerosols formed by photochemical smog reactions.

Noise - No noise-monitoring data is available for the subject lands. Existing noise conditions in the area are typical of noise conditions in desert open space areas (relatively quiet). Noise sources would include vehicle use on Table Mesa Road, and recreational shooting.

There are no federal, state or county regulations that apply to the off-site noise that would be generated by the proposed operations.

Hazardous substances and waste - No storage of any wastes as identified in 40 CFR Part 261 will occur within the subject land boundaries. The operator will utilize several hazardous substances (these may include: acids, alkalis, chlorinated solvents, compressed gases, coolants, dusts, flammable solvents, fuels, paints, phenolic compounds, and oils and lubricants) and/or petroleum products in their normal business.

Visual Resources - Visual resources near the subject land consist generally of typical Sonoran Desert landscape features. The operation will be visible from portions of the Black Canyon Trail, Table Mesa Road, and Interstate 17 (Figure 1).

Background views in the area are typical of the landscape setting in much of central Arizona, consisting of a distant view of foothills and mountainous terrain. Middle ground

views in the area are of flat desert scrub habitat in the lowland areas and of higher elevation hills, bluffs and mountains.

Visual Resource Management classes were not established for this area by the RMP. A VRM inventory (Appendix C) and viewshed analysis of the area was conducted in October 2005 and the area was assigned a Class III rating. The proposed activity is compatible with a Class III VRM area. Following is a table showing acreage of viewshed by ownership within a 5,000 meter radius where the proposed activity will be visible:

<b>Land Ownership</b>	<b>Acres</b>
Public (BLM)	2,007.5
State	989.5
County Park	90.6
Private	184.3
<i>Total</i>	<i>3,271.9</i>

Invasive, Nonnative Weeds - The Bureau policy regarding management of Invasive, Nonnative Weeds as found in Partners Against Weeds (PAW) Action Plan, January 1996, states that an analysis of the potential for weed spread must be examined and established as an environmental consequence of proposed actions. Measures and stipulations to minimize the spread of weeds must be provided.”

No invasive, nonnative weeds were observed in the immediate area of the project site.

Environmental Justice - In compliance with Executive Order 12898, the Hassayampa Field Office identified no minority or low-income populations that could be disproportionately affected by the proposed action. The BLM determined that there are not a significant number of minorities or low income populations living in the affected area.

Areas of Critical Environmental Concern (ACEC) - There are no designated ACEC areas within proximity of the proposed mining operation.

Farmland, Prime/Unique - There are no prime or unique farmlands found within the boundaries of the subject lands

Floodplains - There are no floodplains within the project area limits. The operation as proposed will not impact any waters of the U.S. that would require a 404 permit from the Corp of Engineers.

Wetlands/Riparian - There are no wetlands or riparian areas within the project area limits.

Wild & Scenic Rivers - There are no wild and scenic rivers that occur within the project area limits.

Wilderness - There are no designated wilderness areas within or in proximity to the proposed mining operation.

Standards for Rangeland Health - The subject lands have not been evaluated to determine if they currently met the Arizona's Standards for Rangeland Health.

Black Canyon Trail - The Black Canyon Hiking and Equestrian Trail (BCT) begins just north of the Carefree Highway, just west of the Ben Avery Shooting Range, and ends in the Prescott National Forest near the Dugas Road Interchange on Interstate 17. The BCT is located west of Interstate 17. The BCT gradually ascends from 1,500 feet to 4,500 feet in elevation. Nearly 17 miles of the BCT in Maricopa County from the Carefree Highway to the Agua Fria River have been constructed and signed. When completed, the BCT will be over 60 miles long.

On January 3, 1969, the Secretary of the Interior established the Black Canyon Trail Area and directed BLM to administer this area for hiking, riding, and other forms of recreation. On May 14, 1987, BLM entered into a cooperative recreation management agreement with Maricopa and Yavapai Counties for the development and management of the BCT. The Phoenix Resource Management Plan (RMP), approved in 1989, formalizes the BLM's long-term commitment to cooperatively develop and manage the BCT with Maricopa and Yavapai Counties and to preserve the historic and recreation values of the BCT. The Black Canyon Trail Master Plan and Amendment guide the planning and development of the BCT. This area is open to multiple use management.

The BCT is used by a variety of trail users. The south 20 miles of the BCT crosses terrain especially suited for mountain biking, hiking, and horse riding. All of these uses are increasing as development occurs in the surrounding land. The BCT provides the trail user with an opportunity to escape the urban setting.

The location of the BCT in relation to the subject lands can be seen in Figure 1.

Lands and Realty Actions – The subject lands are currently segregated under FLEFA (AZA-31281). In spite of this segregation the applicant has located several mining claims that encumber the subject lands. The segregation expired on May 16, 2005.

There are five rights-of-way (ROW) on or in the vicinity of the subject lands. The rights-of way are as follows (see Figure 4):

AZA-4393: Power transmission ROW issued to Arizona Public Service  
AZA-17148: Power transmission ROW issued to Arizona Public Service  
AZA-13912: Telephone line ROW issued to Qwest Corporation  
AR-018941: Telephone line ROW issued to Quest Corporation  
AZA-18930: Road ROW issued to Maricopa County

Soils – As can be seen from Figure 5, the soils of the subject lands are mapped as Eba-Pinaleno complex and Rock outcrop-Lehmans complex.

The Eba-Pinaleno soils are deep and well drained. Typically the Eba soils have a surface layer of pink very gravelly loam about 3 inches thick. The subsoil is reddish yellow very gravelly clay and extremely gravelly clay about 33 inches thick. The substratum to a depth of 60 inches or more is reddish yellow extremely gravelly sandy loam. The soil is calcareous below a depth of about 11 inches. Permeability of the Eba soil is slow. Available water capacity is low. Runoff is medium, and the hazard of water erosion is slight.



Typically the surface layer of the Pinaleno soil is yellowish very gravelly clay loam about 1 inch thick. The upper 11 inches of the subsoil is yellowish red, calcareous gravelly clay loam and very gravelly clay loam, and the lower 12 inches is light brown, calcareous gravelly loam. The substratum to a depth of 60 inches or more is light brown, calcareous loam. Permeability of the soil is moderately low. Available water capacity is low to moderate. Runoff is slow to medium and the hazard of water erosion is slight.

On the subject lands the Rock outcrop-Lehmans complex consists mostly of Rock outcrop, with very little Lehmans. The Lehmans soil is very shallow and shallow and is well drained. The surface layer is reddish brown very gravelly clay loam about 2 inches thick. The subsoil is reddish brown clay and clay loam about 2 inches thick. The subsoil is reddish brown clay and clay loam about 13 inches thick. The substratum is reddish brown very gravelly clay loam 5 inches thick over bedrock (U.S. Dept. of Agriculture, 1986).

Recreation – The subject lands are heavily used for general recreation, including hiking, horseback riding, OHV travel, mountain biking, target shooting, camping, and sightseeing. People camp adjacent to the Table Mesa Road and use the road as a major route for their motorcycles and ATVs. Table Mesa Road is a major “gateway” route to the Maricopa County Lake Pleasant Regional Park with 200 to 300 people accessing the park during winter weekends. Currently, Special Recreation Permits are issued each year for two individual week-long events, the Jamboree and Bronco Classic OHV events, which occur in the area, including on parts of the subject lands.

## **ENVIRONMENTAL IMPACTS**

### **IMPACTS OF ALTERNATIVE A**

Wildlife, Botanical and T&E - Impacts to vegetation would include native Sonoran desert vegetation removal. The temporary or permanent loss of desert scrub habitat is considered a minor effect that is not anticipated to substantially affect vegetative resources.

Arizona Natural Gold is planning on concurrent reclamation as mining progresses. A nursery site will be located on the subject lands, where plants will be relocated during mining until they are ready to be replanted.

Impacts to wildlife would result in the loss or relocation of wildlife species, typically rodents and reptiles, associated with this habitat type.

Mining would not affect any listed Threatened or Endangered Species or their habitats. There would be no impact to desert tortoise or any other special status plant or wildlife species. Consultation with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act of 1973, as amended, is not required.

Water Quality - It is not expected that operations will change the nature of groundwater resources within the subject lands.

Any spills of petroleum products that might occur during mining, if not cleaned up as required in Mitigation Measures, could contaminate ground water.

Limitations and monitoring requirements necessary to assure compliance with water quality standards, effluent limitations, standards of performance or prohibitions, and effluent standards are set forth by Arizona Department of Water Resources. By adhering to the permitting process imposed by the above agency, the proposed operation will not produce significant water quality impacts.

Air Quality - Mining operations and the movement of haul trucks may temporarily pollute the air, however, the effects of this will be noticeable only in the immediate vicinity of the pit and haul road. In addition combustion of diesel fuel would emit combustion pollutants, Particulate Matter<sub>10</sub> (PM<sub>10</sub>), nitrous oxides (NO<sub>x</sub>), carbon monoxide (CO), and sulfur dioxide (SO<sub>2</sub>) as volatile organic compounds (VOCs).

On the subject lands the primary source of PM<sub>10</sub> emissions will come from rock crushing and screening. Additional particulate emissions would be generated by extracting material, i.e. rock handling by mine equipment and wind erosion from rock dumps. Use of the unpaved access dirt road will also generate dust. The haul roads and access road will be watered to control dust

Measures are available to minimize VOC and NO<sub>x</sub> emissions during operations on the subject lands. The operator is required to obtain air quality permits and will implement associated dust control plans to reduce project related PM<sub>10</sub> fugitive dust emissions. The conditions of the permit require the operator to keep emissions below minimum regulated thresholds.

By obtaining and adapting required emissions and dust control plans and all necessary air quality permits and conforming to all applicable air quality regulations, affect to air quality would not be significant.

Noise - There are no regulations that apply to the off-site noise that would be generated by the proposed project. As a result, noise impact was assessed using impact criteria defined by U.S. EPA (1974).

The criteria used are related to public health and contains criteria considered adequate to protect against hearing loss and to protect public health and welfare. Specifically, the potential for noise-induced hearing loss is negligible if community noise levels are limited to 70 dBA (L<sub>eq</sub>). The sum total of noise, which exists in communities due to traffic, industry, etc., is termed environmental noise and is most commonly measured in A-weighted decibels (dBA). The L<sub>eq</sub> is the logarithmic average noise level over a given time and the potential for speech interference (i.e., the inability to hold a conversation outdoors in a normal tone of voice) is minimized if community noise levels are limited to 55dBA (L<sub>dn</sub>). L<sub>dn</sub> quantifies the average noise level over a 24-hour period.

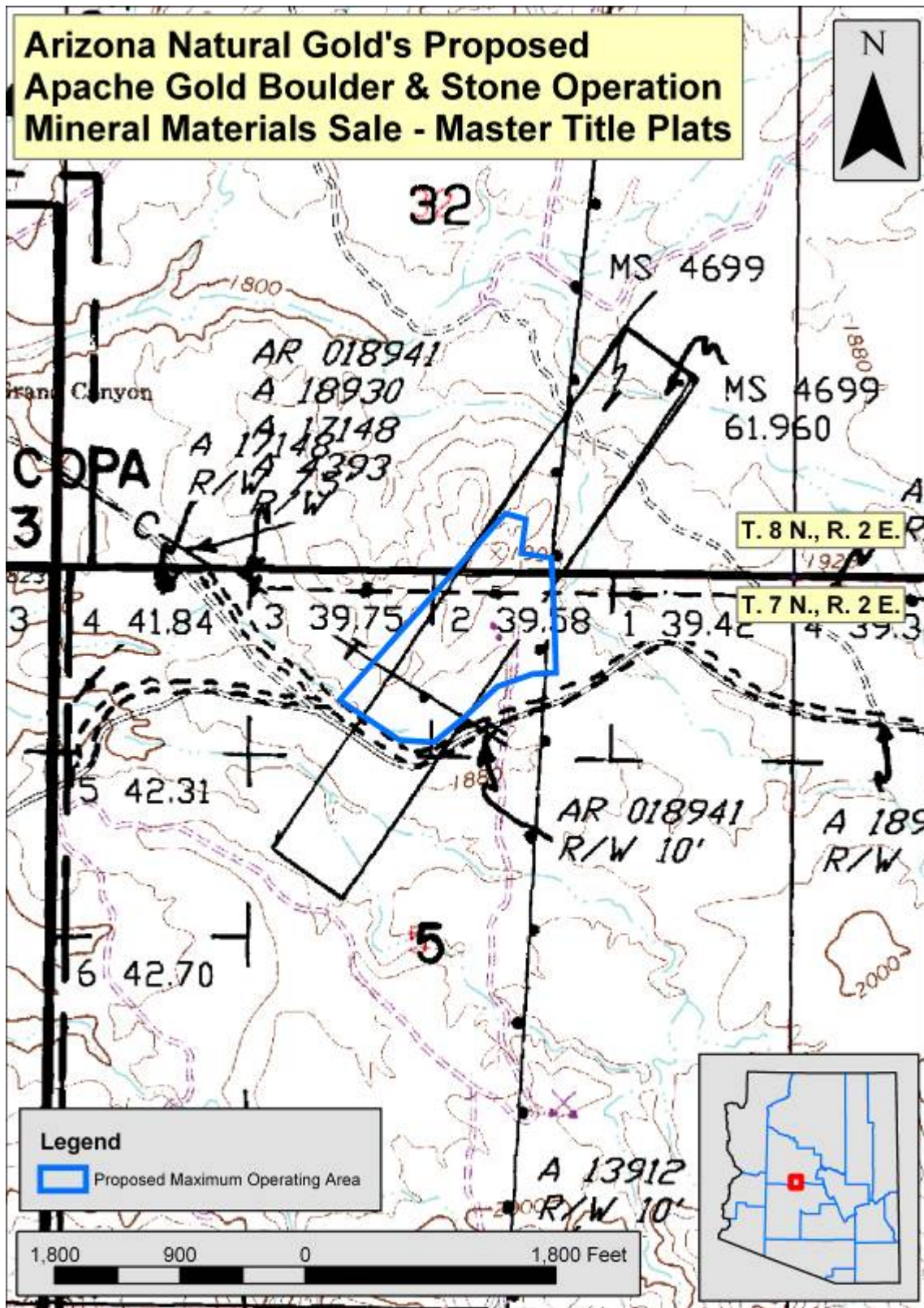


Figure 4. Topographic map of the project area with Master Title Plat overlay showing Rights-Of-Way.



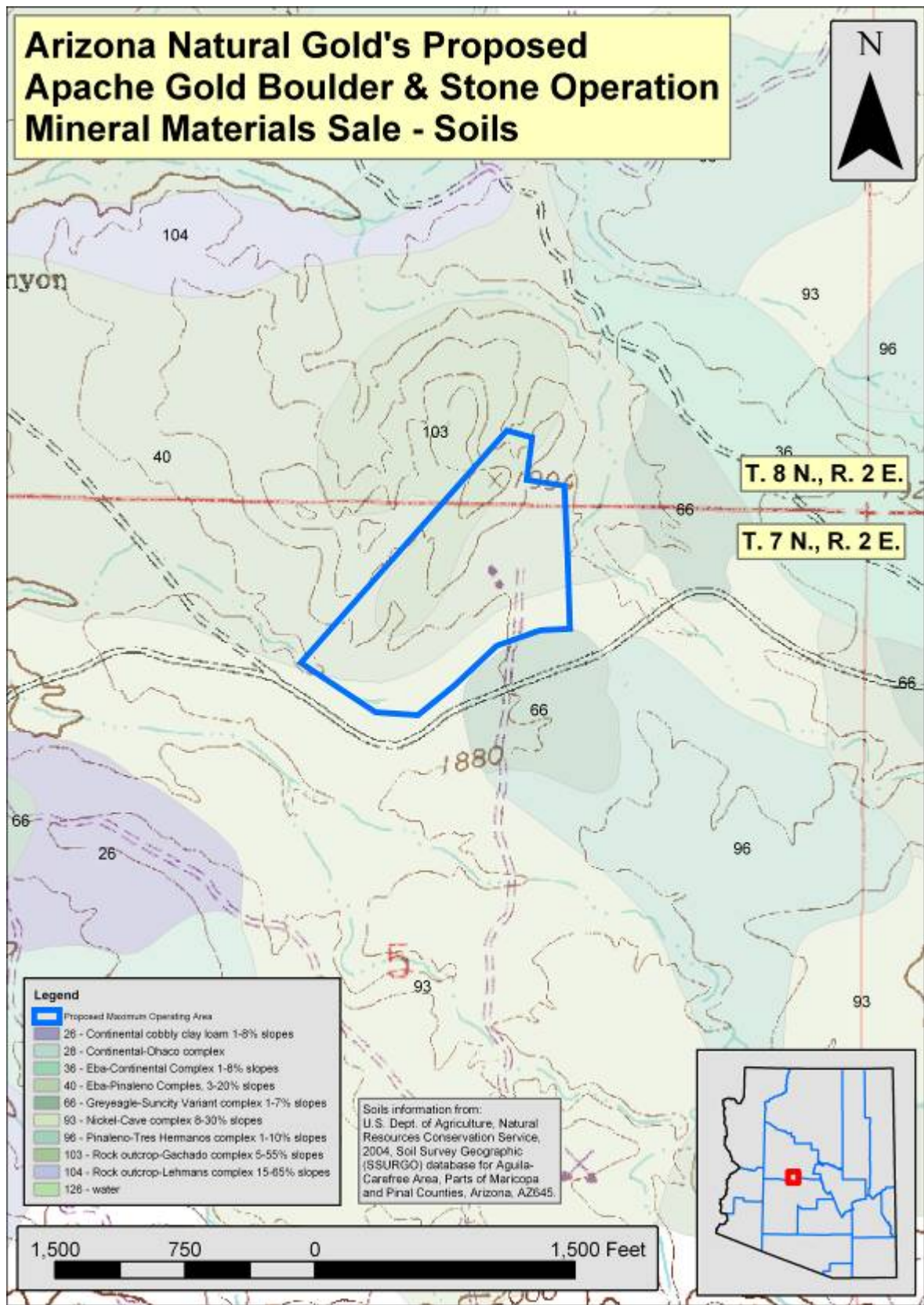


Figure 5. Soils map of project area (U.S. Dept. of Agriculture, 1986).

Mining would result in an increase in noise levels generated by the operating equipment. The two principal sources of noise resulting from the operation of an aggregate plant are:

- Stationary facilities - crushers, screens, maintenance shop, asphalt and concrete plants, etc.
- Mobile equipment - drills, power shovels, loaders, pit trucks, bulldozers, service vehicles.

Accurate noise levels connected with the operation are hard to provide because of the number of possible variables. Some of these factors include plant size, the presence or absence of noise suppression enclosures, equipment age, the amount of screening equipment employed and the types of crushing facilities, and drilling and blasting methods utilized. The operations can vary from intermittent to fairly continuous, and many pieces of equipment can operate at the same time. The types of construction equipment that would be used for a sand and gravel operation would typically generate noise levels of 80-90 dBA at a distance of 50 feet while the equipment is operating.

In general we can say that the mining-related noise levels could be substantial in the immediate vicinity of the mining and processing operation, which would be during daylight hours. Noise levels would be intrusive within .25 mile (line of site) of the operations. The BCT lies approximately .25 miles northeast of the subject lands. The nearest residences are approximately .75 miles northwest of the subject lands.

Soils - There will be disturbance to existing soils due to the nature of the proposed action. In order to put the facilities in the ground the soils will have to be disturbed. Arizona Natural Gold is planning to salvage the topsoil and replace it when mining is completed

Hazardous Materials - Hazardous and potentially hazardous chemicals and materials would be transported to and stored within the project area including diesel fuel, gasoline and motor oil. The transport, storage and handling of these materials would represent an on-going potential for spills that could adversely affect the environment and the safety of the public and project employees.

There would be a potential for public safety-related impacts due to the transport of hazardous chemicals to the project area. Hazardous chemical spillage occurring due to a transport accident is unlikely, but the potential for occurrence cannot be entirely eliminated.

Visual Resources – The proposed operation will be visible from portions of Table Mesa Road and the Black Canyon Trail. However, the Phoenix Resource Management Plan does not address VRM management classes.

A visual contrast rating indicated that the proposed project will affect visual resources by presenting a strong visual contrast with the existing landscape with regard to the form and color of the mid-distance zones, a moderate impact to the line of the terrain and weak impacts to apparent texture of the terrain and vegetation (clearing). The addition



of buildings, crushers, vegetation removal, land disturbance and the like, will add strong impacts to the scene and contrast to the existing landscape.

Black Canyon Hiking and Equestrian Trail (BCT) – The Arizona Natural Gold operation has the potential to indirectly impact the BCT. The proposal is approximately ¼ mile from the BCT. The trail has been moved several times to accommodate lands status and previous resource conflicts. The operation could adversely affect the aesthetic and visual quality of a small section of the trail, leading fewer people to use the trail itself. The mining could impact the recreational setting and could be detrimental to the recreational quality of the BCT.

Invasive, Nonnative Weeds - Disturbance of native vegetation and soils may facilitate the introduction and proliferation of noxious weeds.

Energy and minerals - There will be no direct or indirect adverse impact on energy development, production, supply and/or distribution. A Statement of Adverse Energy Impact will not be prepared.

Lands – There are two existing rights-of-way that cross the subject lands (AZA-4393, 15' wide and AZAR-18941, 20' wide) and a third (AZA-13912, 20' wide) just to the east (Figure 4). There should be no impacts to these rights-of-way as the project would be approved subject to valid exiting rights.

Recreation – The Arizona Natural Gold operation has the potential to diminish the overall recreation of the area. With the increased traffic of large haul trucks on Table Mesa Road, the public may be hesitant to access and recreate in the area. The mineral material sale could create permanent impairment to visual and recreational resources. There will be disruption and loss of use of the area as a camping and staging area, especially for the two annual Special Recreation Permits.

Other - The resources considered and found to be unaffected by the proposed action and alternatives are:

- prime and unique farmlands
- Native American religious issues and traditional uses
- riparian/wetlands
- wilderness
- range management
- wild and scenic rivers
- areas of critical environmental concern
- threatened or endangered species
- environmental justice
- cultural resources

Cumulative Impacts - Because the proposed operation is subject to the environmental commitments identified in this EA, the removal of mineral material from the subject lands would have little, if any, environmental impacts on special status plant and wildlife species, cultural resources, air quality, noise, water quality and visual resources.

Other past, present or reasonable foreseeable actions proposed in the area that would contribute to cumulative background conditions include, scattered residential development, ranching and recreation activities, and other mining operations like the Rinker/United Metro Materials decorative rock operation approximately 1.7 miles southeast of the proposed Arizona Natural Gold site.

The proposed action is not expected to result in substantial increases in cumulative impacts beyond those resulting from other past, present or reasonably foreseeable actions.

## IMPACTS OF ALTERNATIVE B

The selection of the No Action alternative would result in no change to the existing resource condition. Under this action the mining related impacts on the subject lands would not occur.

## PROPOSED MITIGATION MEASURES

The applicant shall operate under a mineral material contract with an approved Plan of Operations that incorporates all aspects of the Proposed Action as described in this EA.

The contract will be conditional upon the applicant obtaining all other federal, state and local permits required to operate the project. Applicable Federal, State, and County policies and regulations shall be adhered to by the operator. Prior to beginning operations, the operator must provide a copy of all pertinent permits and authorizations to this office. These permits shall attach to and become a part of the contract and Plan of Operations.

The applicant shall control, reduce, remove, and prevent air and noise pollution in compliance with all local, county, or state regulations and ordinances. The area shall be maintained at all times in a condition that is not hazardous to humans or livestock.

Visual impacts will be minimized by reducing the amount of disturbance occurring at any one time and through concurrent reclamation where feasible.

The contract will be subject to the attached stipulations (Appendix A) and to the Plan of Operations.

BLM personnel will conduct routine compliance inspections on the material site for the review of production records, or for the purpose of inspection or inventory of other resource values. If invasive, nonnative weeds are detected during the inspection period, operator shall be required to implement weed control, prevention, and treatment factors to remove the seed source and limit seed transport into the project site. Suitable weed treatment and prevention techniques will be established by the BLM.

Prior to beginning operations the applicant will contact and coordinate with the current right-of-way holders to insure that the holder's rights are protected. The applicant will not disturb or otherwise interfere with or alter existing rights-of-way on the subject lands without permission from the current holder and BLM.

As portions of the subject lands have in the past been used as a staging area for special recreational activities permitted by PFO, the applicant will need to accommodate this activities on those portions of the lands not used for mining, until current permits expire.

Any cultural and/or paleontological resource (historic or prehistoric site of object) discovered by the holder, or any person working on his behalf, shall be immediately reported to the Bureau of Land Management authorized officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values.

The area will be reclaimed in accordance with reclamation guidelines as found in the Metropolitan Phoenix Mineral Materials Program Guidelines, 1995 and H-3041-1, Solid Mineral Reclamation Handbook.

#### PERSONS AND AGENCIES CONSULTED

- Jim Andersen, Lead Realty Specialist, Phoenix FO
- Lee Higgins, Lead Natural Resource Specialist, Phoenix FO
- Cheryl Blanchard, Archaeologist, Phoenix FO
- Tim Hughes, Lead Wildlife Biologist, Phoenix FO
- Jack Ragsdale, Outdoor Recreation Planner, Phoenix FO

#### REFERENCES

- Bryant, Bruce, 1999, Geologic Map of the New River Quadrangle and Part of the Daisy Mountain Quadrangle, Maricopa and Yavapai Counties, Arizona: Arizona Geological Survey Contributed Map CM-99-C, scale 1:24,000, 32 p. text.
- U. S. Department of Agriculture, Soil Conservation Service, 1986. Soil Survey of Aguila-Carefree Area, Parts of Maricopa and Pinal Counties, Arizona
- U. S. Department of the Interior, Bureau of Land Management, Phoenix District Office, 1989, Proposed Phoenix Resource Management Plan and Final Environmental Impact Statement, (p.14)
- U. S. Department of the Interior, Bureau of Land Management, Phoenix District Office, 1995, Metropolitan Phoenix Mineral Materials Program Guidelines, unpublished document.
- U.S. Department of the Interior, Bureau of Land Management, Phoenix District Office, 1992, Solid Minerals Reclamation Handbook, BLM Manual Handbook H -3042-1.
- U.S. Environmental Protection Agency (EPA), 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.

## Appendix A

### Special Stipulations, Contract AZA-32842

1. Unless otherwise provided by this contract, the Purchaser shall have the right to extract and remove the materials until the termination of the contract, notwithstanding any subsequent appropriations or disposition under the general land laws, including the mining and mineral leasing laws.
2. Purchaser shall take fire precautions and conservation measures and shall dispose of slash or other debris resulting from operations hereunder in accordance with written instructions from the Authorized Officer.
3. BLM's authorization does not imply that Federal approval has been granted to the purchaser or their customers the right to transport trucks and rock products across any City, County, State, private or other Federal property or roads. Buyer or their customers shall be held liable for any damages to such property.
4. Purchaser shall sever, extract, or remove mineral materials from the subject lands only in accordance with the mining plan. The purchaser will obtain and keep current and in good standing all required State, City, County, and Federal agency permits and will abide by stipulations as set forth in said permits. Purchaser will comply with all applicable Federal, state and county pollution standards and permits.
5. BLM's approval of the purchaser's proposed Plan and authorization of a sales contract shall not be construed to effect a preemption of Arizona State laws and regulations or to imply that BLM has granted any approvals normally under the purview or regulatory authority of City, County or other Federal agencies.
6. Any previously unknown cultural and/or Paleontological resource (prehistoric or historic site or object) discovered by the holder, or any person working on his behalf, on the subject lands shall be reported immediately to the Bureau of Land Management's authorized officer. It is unlawful to disturb, deface, or remove these cultural and paleontological resources unless authorized by the Bureau of Land Management under a cultural resources use permit. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values
7. Access to the material site area shall be provided to BLM in order to conduct routine inspections of the extraction and removal of minerals, for the review of production records and sales data, or for the purpose of inspection or inventory of other resource values. Inspections may be unscheduled and will generally be conducted during normal working hours. When entering the project area BLM employees will first make their presence known to appropriate company personnel and then proceed to inspect the area in accordance with proper health and safety standards and requirements. Such inspections are not normally expected to stop or impede normal mining and processing functions by the company.
8. The monthly production and royalty is due BLM at this office as outlined in Sec. 3(b) of the contract and shall be reported as follows:

- A list shall be provided to BLM showing all sales of materials mined and transported. Listing shall include the date, the customer/buyer name, the invoice number, product description and product weight in tons. A total weight shall be indicated for the month reported.

- If no sales occur during a particular month that should also be indicated by submitting a statement that there were no sales across the scales that month.

9. Purchaser shall defend, and hold harmless the United States and/or its agencies and representatives against and from any and all demands, claims, and liabilities of every nature whatsoever, including, but not necessarily limited to, damage to property and injuries or death of persons arising from any activity connected with the purchaser's use or occupancy of the lands described in this contract, or with the activity authorized under this contract.

10. The area will be reclaimed in accordance with reclamation guidelines as found in the Purchaser's and Reclamation Plan, Metropolitan Phoenix Mineral Materials Program Guidelines, 1995, and H-3041-1, the Solid Mineral Reclamation Handbook.

11. Solid waste will be disposed of in accordance with local laws. The purchaser shall promptly remove and dispose of all waste caused by its activities as directed by the authorized officer. The term "waste" as used herein means all discarded matter, but not limited to human waste, trash, garbage, refuse, petroleum products, ashes and equipment. Wastes shall be disposed of in a sanitary landfill unless otherwise approved by the authorized officer. No burial of wastes on site is allowed. The area shall be maintained at all times in a condition that is not hazardous to humans or livestock.

12. Operations shall be limited to the areas as described in the approved Plan of Operations.

13. Prior to removal of protected plants, the purchaser must have prior approval and the necessary authorizations issued by the State of Arizona.

- The Purchaser must notify the Arizona Department of Agriculture and Horticulture 30 days before the beginning surface disturbance for possible salvage of Arizona protected plants.

14. The purchaser shall implement plans and procedures to reduce the potential effects of spills or accidents which might include site security and safety measures, fire protection procedures, emergency response and notification procedures, best management practices for materials, transportation, handling and storage, contingency planning for accidental discharges and spill prevention control countermeasure planning. In the event of an accidental discharge or spill, the on-site emergency coordinator will direct the immediate cleanup. A list of emergency phone numbers will be on-site and readily accessible. Good housekeeping rules will be followed to keep chemicals and waste material from entering any drainage areas. This may include providing sediment ponds, implementing proper disposal of oil and grease and use of lined pits for chemical storage. Care will be taken to ensure that no oil, grease, used filters or antifreeze can contaminate the soil. All used items will be properly stored and disposed of.

15. In the event that invasive or nonnative plant species are found in the area of operations, the purchaser will undertake necessary measures to eliminate the species. If invasive, nonnative weeds are detected in the area of operations, the Purchaser shall implement weed control, prevention, and treatment factors to remove the seed source and limit seed transport. Suitable weed treatment and prevention techniques will be established by the BLM.



16. If a live desert tortoise is encountered, operators must remove the tortoise from any danger and immediately contact the Arizona Department of Game and Fish so that they may determine if they need to recover the animal.

17. Any mineral materials contract will be subject to prior valid existing rights, i.e. Rights-of-Way and / or Special Recreational permits. Purchaser shall not interfere with existing authorized uses, unless and until Purchaser has obtained permission from current permit and / or Right-of-Way holders and the BLM.

Prior to beginning operations Purchaser will contact and coordinate with the current rights-of-way holders to insure that the holder's rights are protected

As portions of the subject lands have in the past been used as a staging area for special recreational activities permitted by PFO, the applicant should make an effort, to the extent safely practicable, to accommodate those activities on those portions of the lands not needed for mining or attendant facilities.

## Appendix B – Submitted mining and reclamation plan of Arizona Natural Gold

**BUREAU OF LAND MANAGEMENT**

**Phoenix Field Office**

**21605 North 7<sup>TH</sup> Avenue**

**RECEIVED**  
BUREAU OF LAND MGMT.

**Phoenix, AZ 85027**

**RECEIVED**  
BUREAU OF LAND MGMT.

DEC 30 2004

**Attention:**

DEC 30 2004

PHOENIX FIELD OFFICE  
PHOENIX, ARIZONA

**Mr. Jeff Garrett**

PHOENIX FIELD OFFICE  
PHOENIX, ARIZONA

**Here is the information you requested to  
help facilitate the processing of our mining  
plan of operations for:**

**‘APACHE GOLD BOULDER MINE’**

**(210) 3600 AZA-32842**

**by**

**Arizona Natural Gold**

**Excavation and Reclamation, Inc.**

**515 E. Carefree Hwy, PMB 378**

**Phoenix, AZ 85085**

## **Apache Gold Boulder Mine, (210) 3600 AZA-32842**

### **Follow-up Questions Addressed**

- A. Please address access to the mine site and how this access will be maintained. Provide estimates of the number and type of vehicles, related to your operations, that would use this access on a daily/weekly basis.

1. Access to the mine site will use existing roads that will be upgraded to county specs by bar ditching, berming and crowning with local decomposed green schist from our waste dump area. These roads will be watered and graded periodically as needed for dust control, etc. See map "A", enclosed. Roadside drainage ditches will have rock windrows to slow erosion by constricting water flow along roads.
2. Workers and trucking vehicles and their road usage will be restricted to the main access road and lower level loading areas. Only excavation and onsite mineral hauling equipment will be allowed on upper haul roads and benches.

Approximately two cars, two pickup trucks and 4 semi-truck boulder hauling flatbeds will use the main access road on a daily basis, one time each, ingress, egress, five days per week. One pickup and one car will use main access road on weekend days with no semi-trucks on weekends.

At a later date in Phase II of the operation (approximately four months after startup), the semi-truck haulage rate will double to approximately eight trucks with boulder trailers coming into the site for loading and then leaving per day, five days a week to equal forty truckloads of approximately twenty-four tons each per week.

All vehicles will have access to a water spigot to rinse down loads for dust control, etc. prior to leaving on Table Mesa Road.

Also, as we develop our "Black Buffalo Facing Stone Mine", two miles to the east on Table Mesa Road, our company owned 26' flatbed truck will be hauling from there to the Apache Gold Boulder Mine site for weighing, storage, truck reloading and sales. This truck will run back and forth approximately three days per week, one trip per day. As stated, the loads of pallet baskets will be weighed and offloaded on site. See map "A".

- B. Your plan indicates that you will be using a well located on site. Please indicate the depth to water and the amounts of anticipated water use. Please provide an update as to the status of any permits associated with use of this well.

1. Our company, Arizona Natural Gold Excavation and Reclamation, Inc., applied for ownership to the State Department of Water Resources, on October 21, 2004 and the ownership status form was to be sent to the Bureau of Land Management for sign-off and transfer. At the time we applied with the State, they stated that we are in an unlimited water use area and that we could pump one hundred gallons per minute if we needed to. However, we will only need the water for low level domestic use (lodging and showers) and filling our water truck (two thousand gallons per load, two times per day) for road maintenance and rock loading dust control.
2. The well was drilled to a one hundred fifty foot depth with the water table being encountered at sixty-two feet. The well is cased with steel perforated casing to one hundred fifty feet deep. The tested pumping capacity was twenty-five GPM. The completion date of the well was July 15, 1976. Please see the enclosed well statistics sheet.

Apache Gold Boulder Mine, (210) 3600 AZA-32842  
Follow-up Questions Addressed (continued)

**C. Please indicate on your operations map the location of your native plant nursery, and the location of any waste piles and topsoil salvage piles. Discuss how topsoil and plants will be salvaged, maintained and redistributed.**

1. The native plant nursery location along with waste piles and topsoil storage piles is shown on the enclosed map "A". A water line will be run over to the plant nursery to periodically provide water for the transplanted trees and cactus to keep them alive until replanting on reclaimed site. The area reserved for the nursery site is a good growing soil medium, approximately three feet thick with excellent moisture drainage characteristics that will help control root rot, etc. on the transplanted saguaros, bushes, trees and cacti.
2. Topsoil from mined areas will be skimmed off and trucked to storage area (see map "A"). The site's natural soil layers are located along the base of the slopes only and where haul roads and excavations impact this soil layer, it will be salvaged as stated above.

All waste rock piles and soil storage piles will be protected from erosion with water runoff ditching and berms along their edges and with rock windrows in the ditches to slow down water flows, etc. These piles will be recontoured and replanted upon commencement of the reclamation phase of operations.

A landscape and cacti planting service, T-J's Landscaping, will be used for consultation on salvage and replanting of vegetation, etc. A cactus relocation service will be used to transplant/replant saguaros and large barrel cactus, etc., to and from the nursery area.

When benching reaches saguaro/cacti locations, the service will be called to do the transplanting as we provide access to each specimen.

When reclamation occurs, the same service will be used to relocate cacti, saguaro, etc., to their approximate original positions. A map of these natural original locations will be made and copies available on site to the Bureau of Land Management or the planting service for future reference. These maps will be made prior to three hundred foot sections being benched and excavated.

**D. Please list or describe your anticipated hours of operation.**

The site's operating hours will be Monday through Friday, eight hours per day, five days per week with no truck traffic on weekends because of the multi-use recreational nature of Table Mesa Road and the Lake Pleasant access route passing by our gate.

**E. Please make clear the total amount (in acres) of anticipated surface disturbance.**

As determined by working with a county engineer, our Phase I surface disturbance total area is three acres. This includes areas previously cleared by others (1.5 acres) that will be used for infrastructure needs, scale and scale house, fuel and equipment fenced storage area, loaded pallet basket storage, etc.

As the operation proceeds, one acre at a time will be reclaimed and replanted to "solid mineral reclamation" specifications at the time that Phase II and Phase III mineral sales are applied for.

Apache Gold Boulder Mine, (210) 3600 AZA-32842  
Follow-up Questions Addressed (continued)

- F. Please address how your proposed operations will impact existing utilities (power lines, etc.) at the mine site, or how you will avoid impacting these utilities. It may be helpful if you contact the utility owners to discuss possible concerns and solutions with them.**

There will be no impact on existing utility lines that criss-cross the site except that at a future date, one phone line pole and one electric line pole will have to be moved approximately thirty feet sideways once a lower level of topography is reached to allow for the electric lines to remain at a safe height. We will work well away from both poles until Phase II is reached. We will have signs on the poles to alert and remind of overhead wires for safety regulations and worker safety.

Qwest Phone Company and APS Electric Company are being notified at present of long term plans and if any problems arise about pole and line relocation at a future date, we will always follow these service companies' recommendations and will pay any costs incurred to engineer plans for relocation of poles, etc.

- G. Please discuss whether or not employees, include the number of employees, will be living on site, and whether a septic or wastewater permit will be needed for grey water and sewage disposal/storage.**

1. Site security will be achieved by three land line phones on site and the on site presence of one to two employees or a watchperson at all times including weekends, after hours, etc. Our scheduling will allow for at least one person to be on site near the phone line at all times. We will provide a camp trailer with electric lines, water lines and phone lines to be used by this watchperson or employee(s) as needed. Two trailers will be on site for this purpose with these amenities for safety, etc.

No work with equipment or facilities will be allowed without the presence of a minimum of two employees on site that have been site and work safety trained.

2. Three portable toilets will be on site and maintained weekly by a sanitation pumping service for employee/visitor use. These will be in easily accessible locations to discourage outdoor contamination, etc.
3. All grey water will not be allowed to go out onto the surface from sinks, showers, etc. and will be guided underground to subsurface leach rock filled buried chambers. No permits are required for these discharges due to the mitigation measures taken in G.2. and G.3.

- H. Please address fuel types, amounts, storage, and uses. Will your power source be fueled generators? Include discussion on what methods you intend to use to deal with any spillages of gasoline, diesel fuel, or lubricants that may occur.**

1. Fuel storage will be in the form of two raised tanks on stands, three hundred gallons each to be supplied, serviced and filled by Supreme Oil Company of Phoenix. These tanks (one gasoline and one red dyed diesel) will be inside a gated chain link fenced area that will be surfaced with a powdered absorbent inside the complete fenced area of one hundred feet by eighty feet.

The tank stands will be inside a three foot bermed basin, rubber-lined with a drain pipe with valve to drain rain water or spilled fuel into disposal containers to be hauled off site if a leak occurs. This basin will be built according to specifications as set out for on site fuel storage to catch and contain any spills that may occur. Any on site oil or fuel spills will be soaked up with absorbent and removed for off site disposal. All excavating equipment will be fueled from these tanks.



Apache Gold Boulder Mine, (210) 3600 AZA-32842  
Follow-up Questions Addressed (continued)

2. Our power source for living quarters, scale house, lighting, etc., will be from an on site APS electric line that crosses the site east to west. A transformer will be on a pole with riser and electric meter with underground lines out to trailers, etc.

A permit to run these additional lines will be applied for upon project startup.

- I. Please provide a detailed discussion of proposed water use, surface water runoff and erosion controls, including how surface runoff will be controlled during the ongoing and post operations. These are the same issues that should be addressed in your Storm Water permit, and possibly as part of any Army Corp permits. Enclosed is a copy of the BLM reclamation handbook for your reference.

1. Water use on site will be limited to a small amount for domestic use and mostly for dust control by filling a water truck and having spigots with hoses at rock loading areas to rinse off boulders and pallet baskets lightly. The loading areas will be surfaced with decomposed green schist (on site waste rock) to help control dust, mud, erosion, etc. Haul roads, access roads and other pallet basket storage areas will also be surfaced the same way.
2. Surface water runoff will be guided with bar ditches lined with rock windrows to trap sediments before reaching existing local washes. These will be left in place when reclamation is complete.
3. Waste rock piles will be ditched on uphill sides with berms on outer edges to guide rain water into rock-lined ditches with windrows placed at regular intervals to stop and help control sediment movement into local waterways.
4. Plant nursery area will be protected in the same manner to keep new rooting safe and in place until replanting date.
5. Storm Water Permit 402 will be applied for on December 30, 2004 and a copy given to Bureau of Land Management as soon as possible.
6. Army Corp regulations for permits are not needed because we will not disturb any deep (+fifteen foot depth) washes.

- J. Please address the current status of other potential necessary permits as outlined in Arizona Mining Summit (enclosed), and what steps you have taken to determine whether you will need any other federal, state, or local permits.

1. As our guide to permitting for this operation we followed the Arizona Mining Summit, guide to permitting mining operations, 1<sup>st</sup> edition, March 29, 1999. All permits covering this operation have been obtained (see enclosed copies) with the possible exception of an electrical connection permit. This permit will be applied for upon the following: project startup; beginning site construction; and prior to final connection of electric lines from the site electric meter to the scale house and trailer sites.
2. Air quality, dust control and earth moving permits from Maricopa County have been obtained, renewable annually for a total of 3 acres (Phase I). See enclosed copy.
3. Arizona State Mine Inspectors notice of start up has been filed and registered. We are State Mine Project #08-02379. Copy has already been filed with the Bureau of Land Management, Phoenix Field Office.
4. Mine Safety and Health notified of approximate startup with actual date to be given them when Bureau of Land Management gives final okay.

Apache Gold Boulder Mine, (210) 3600 AZA-32842  
Follow-up Questions Addressed (continued)

5. State Department of Agriculture said no permit needed to clear and transplant on site for site area. Form filled out and filed with the State Department of Agriculture. Copy has been enclosed.
6. Bureau of Alcohol, Tobacco and Firearms (ATF). Due to the decomposed nature of the green schist country rock and the fractured nature of the jasperoid "ore", no explosives will be needed to startup and operate during Phase I until some depth is attained. When the rock tightens up and explosives are needed we will then apply for the transportation permit and/or have explosives delivered as needed per blast.  
  
We are licensed contractors and our license covers the use of drilling and blasting that is incidental to mine production.  
  
We will use a CASE 580 backhoe with a hydraulic hammer attached to break boulders of waste and "ore" into loadable sizes.
7. Signage for safety concerns, no public access, etc. were ordered last week. A total of forty-seven signs are being made at this time.
8. This mine site does not occur in a flood plain or flood fringe area. No permits required.
9. Storm water discharge permit 402 will be applied for on December 30, 2004, at the AZDEQ office and a copy given to the Bureau of Land Management as soon as possible.

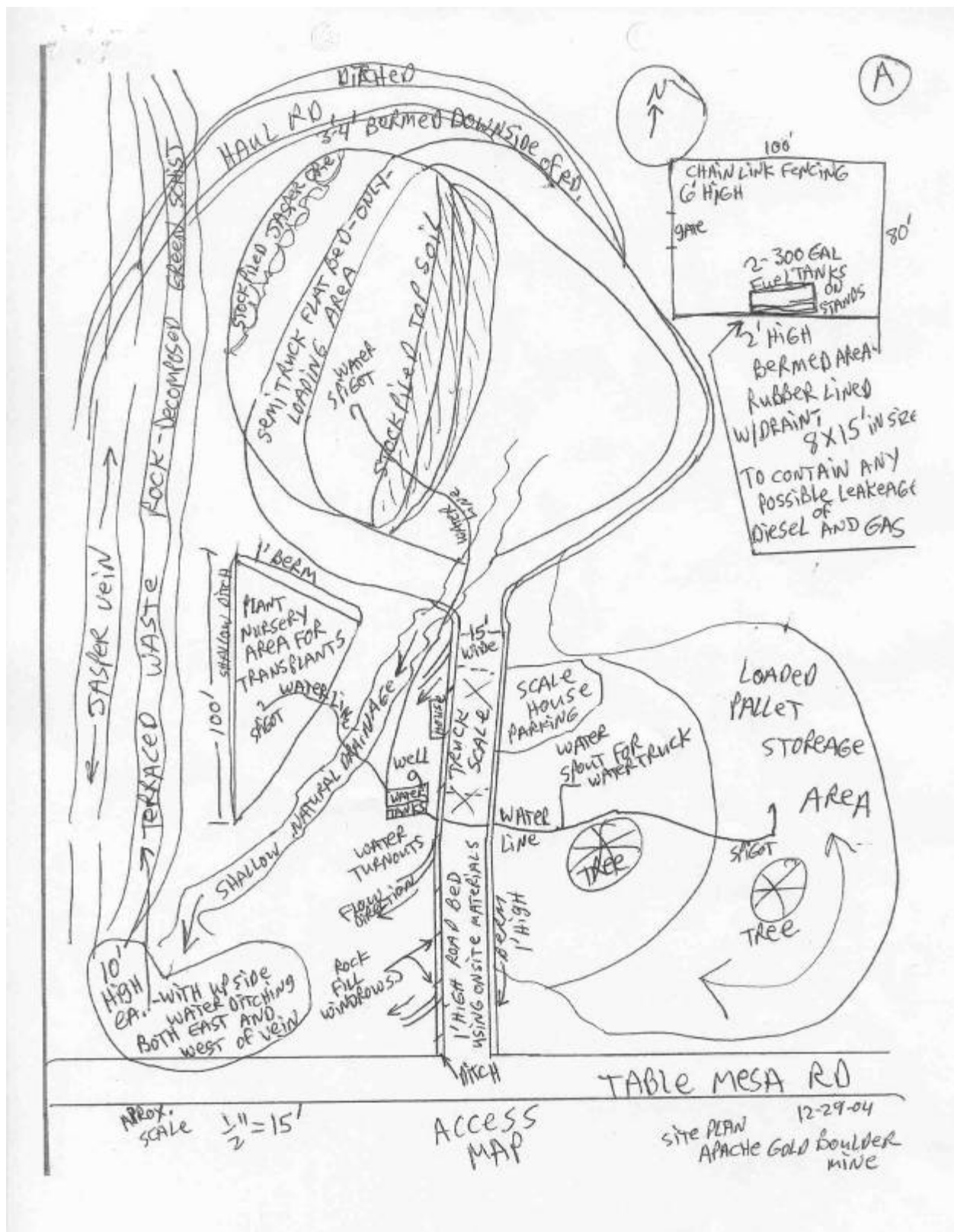
We hope this has sufficiently addressed your concerns and thank you for all your efforts on our behalf. We can be reached at 602.762.9224 for any questions concerning this follow-up and we look forward to receiving our final clearance to proceed.

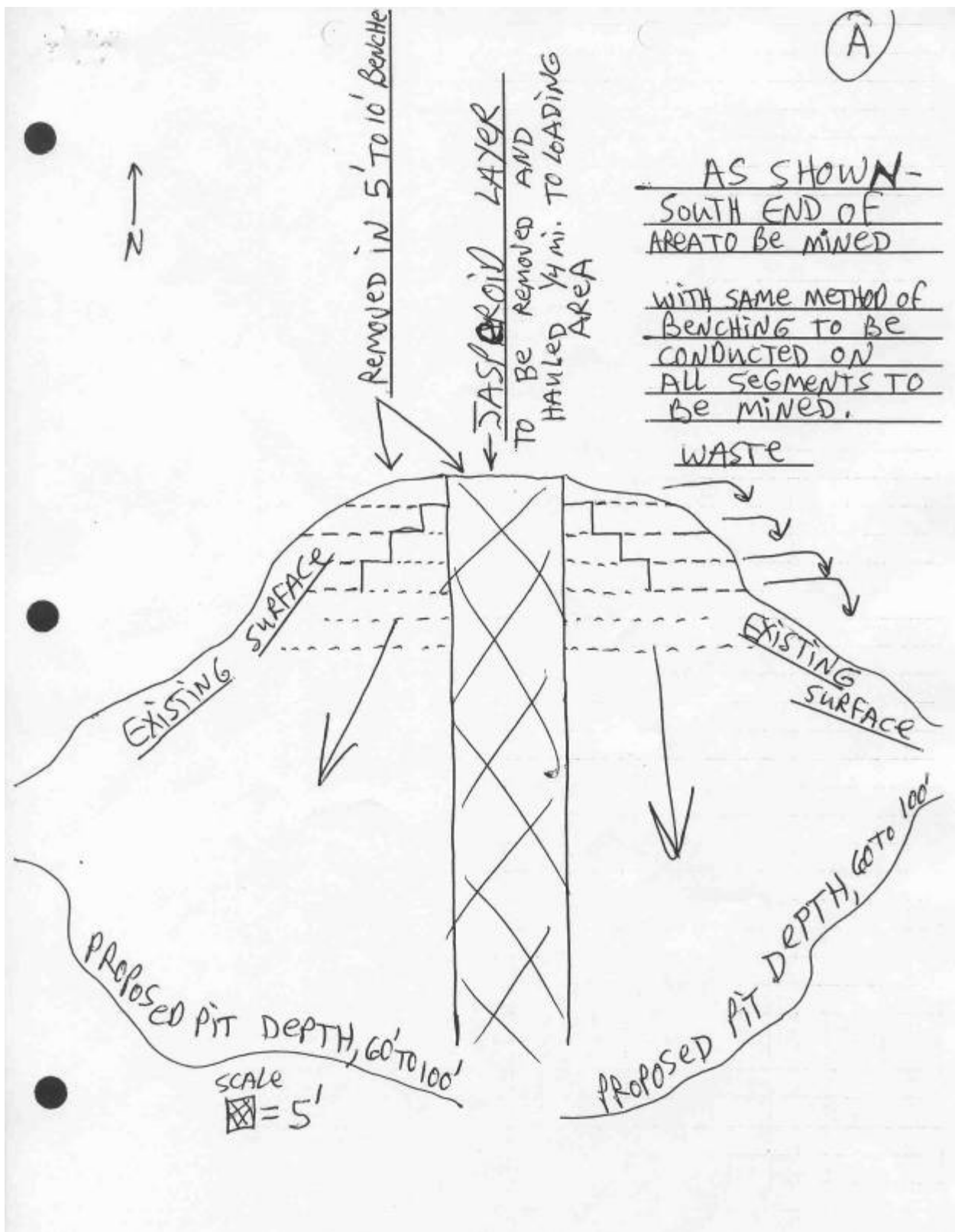
Sincerely,



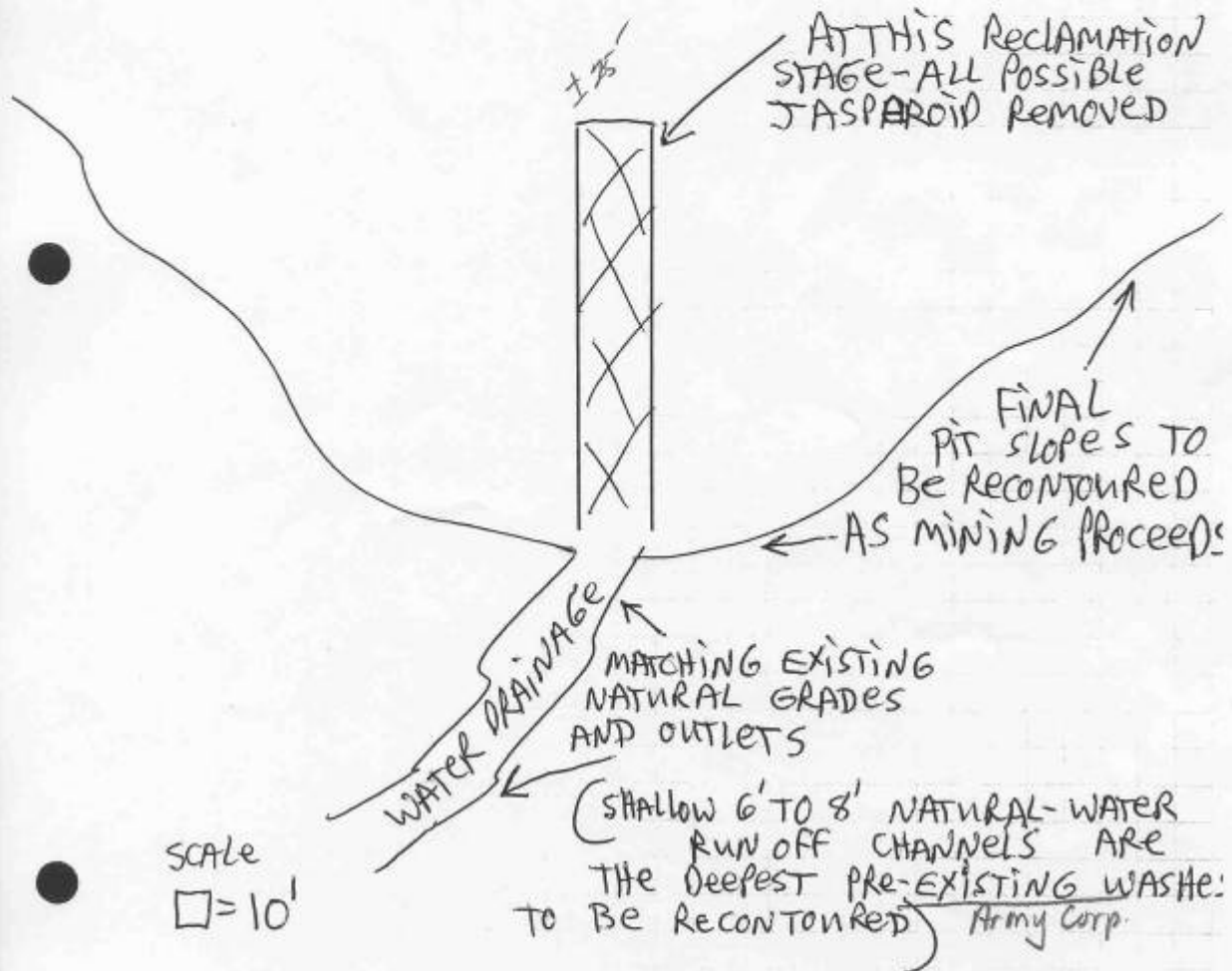
Bill C. Waldeck  
President

Enclosures - 6





(B)

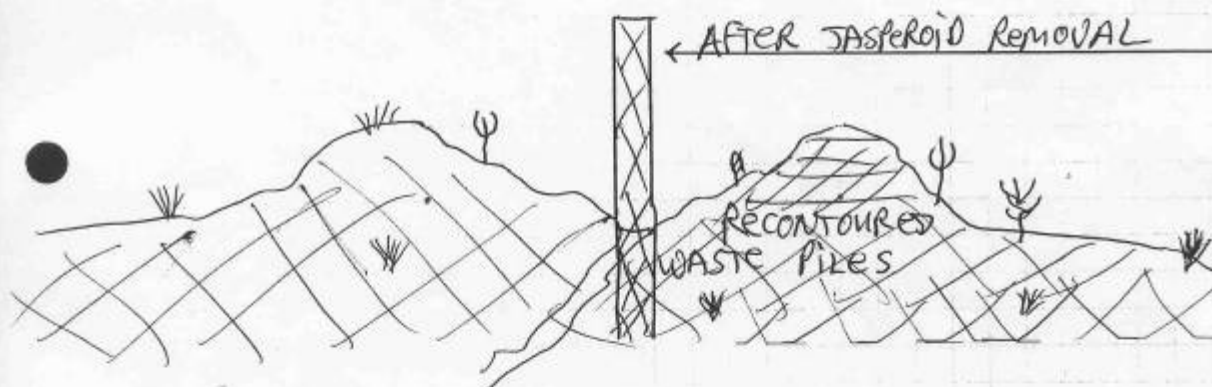


DRAINAGES to be RIP RAPPED etc

(C)



## FINAL PIT RECLAMATION PLAN



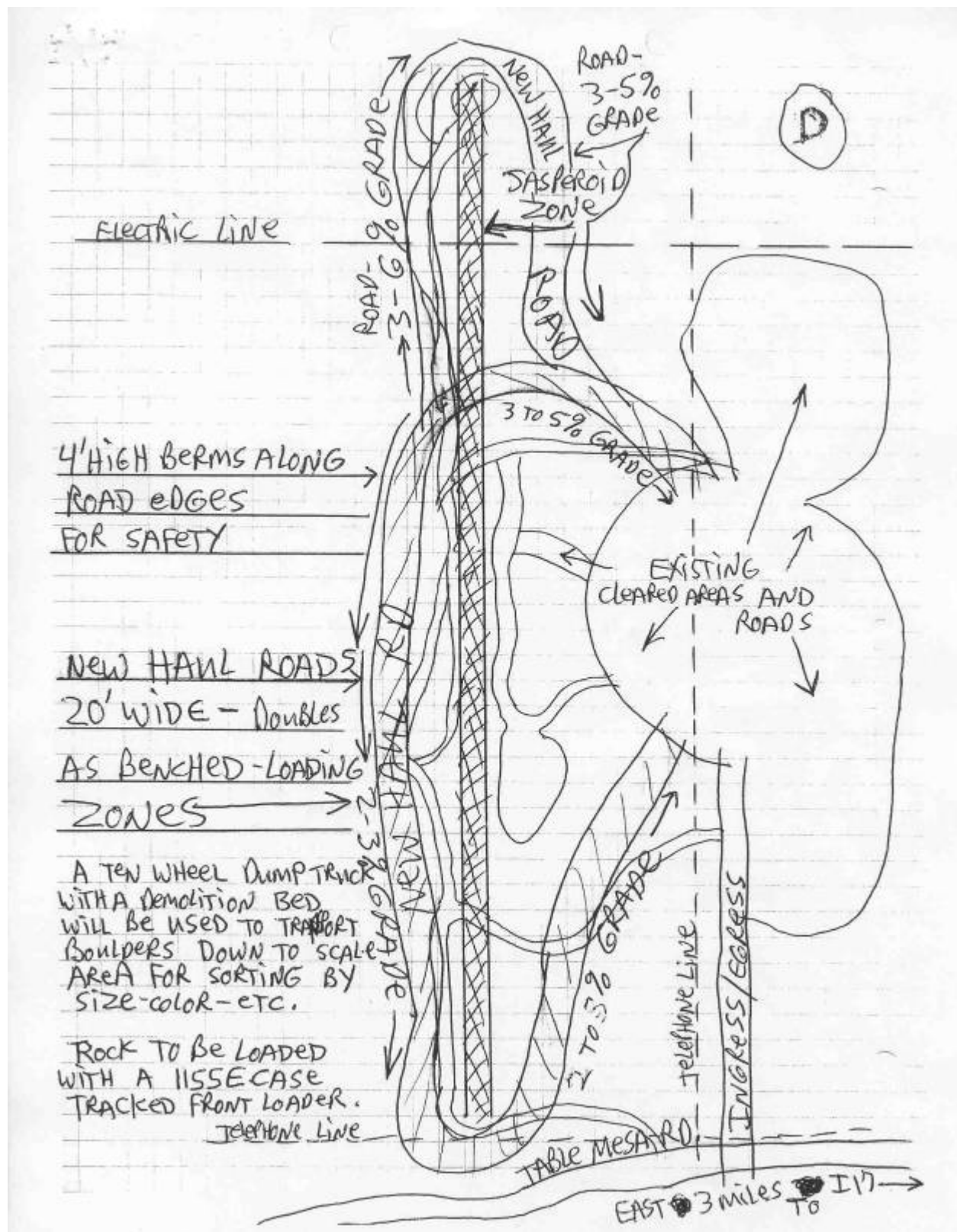
SAGUARO CACTUS, BARREL CACTI ETC.  
TO BE MOVED - REPLANTED ON SITE - AND

AT MINE LIFE'S END - REPLACED, REPLANTED  
ON DISTURBED AREAS IN NEAR ORIGINAL  
POSITIONS, ALSO RESEEDING ALONG WITH

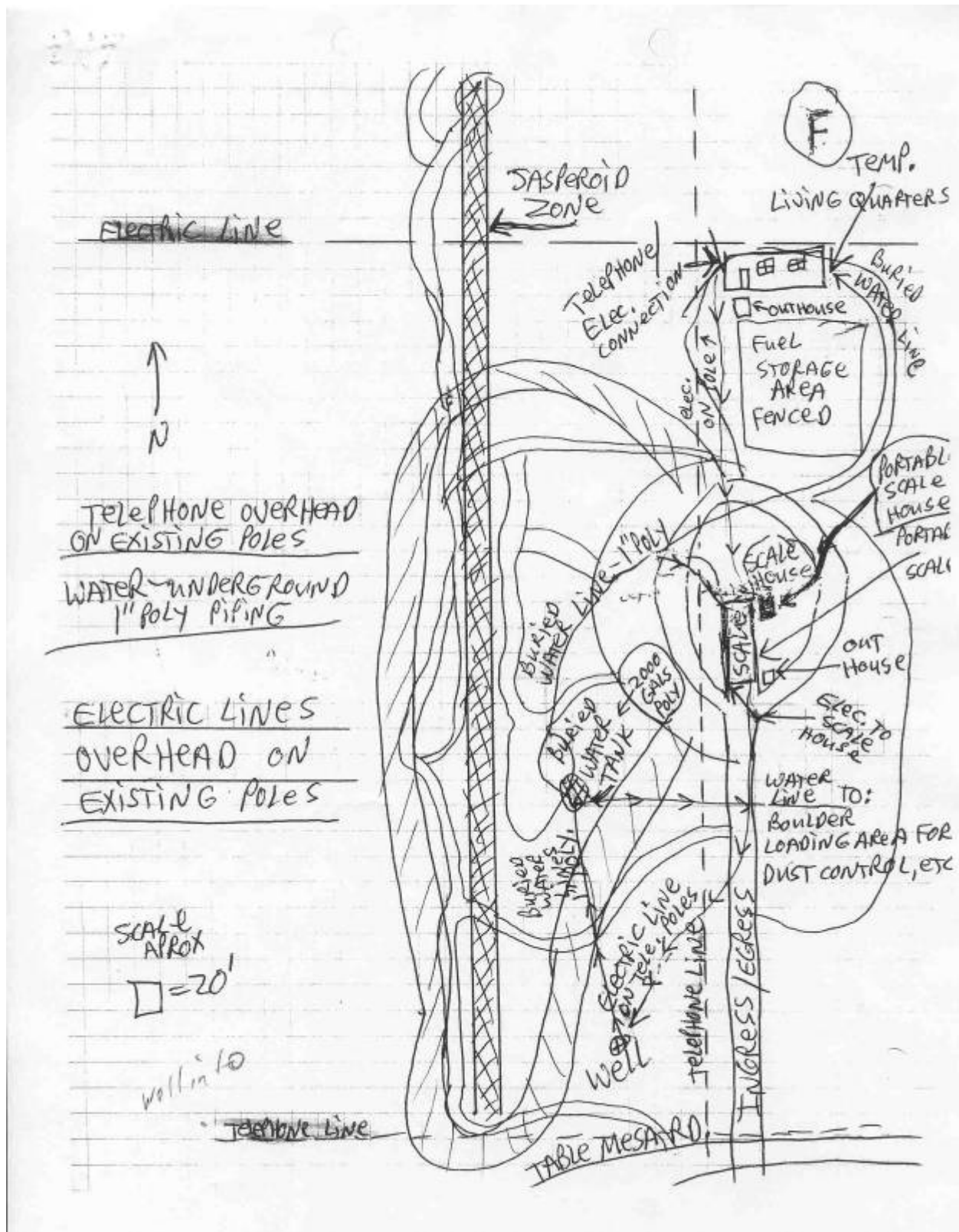
SCALE  
[Cross-hatch symbol] = 20'

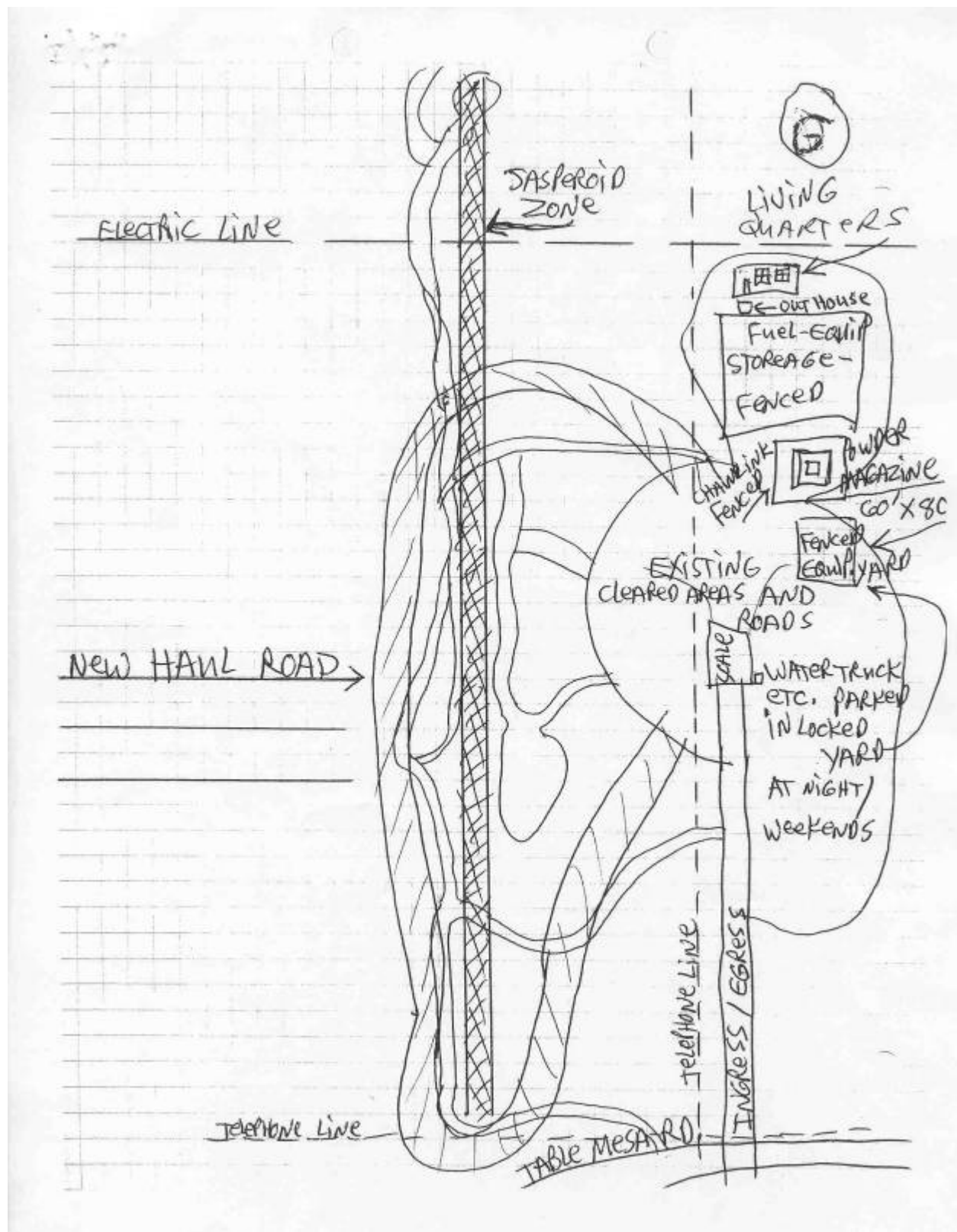
REVEGETATION AS RECLAMATION  
PROCEEDS DURING EXCAVATION.











Run Date: 10/21/2004

AZ DEPARTMENT OF WATER RESOURCES

WELL REGISTRY REPORT - WELLS55

Location A 7.0 2.0 5 5 D B Well Reg.No 55 - 629005 AMA NOT WITHIN ANY AMA OR INA

Name TUFF AMERICAN INC.  
3782 S 4000 W

File Type LATE REGISTRATION  
Application/Issue Date 06/21/1982

W VALLEY CITY UT 84120

Owner OWNER  
Driller No. 0  
Driller Name NO DRILLER SPECIFIED  
Driller Phone  
County MARICOPA

Well Type EXEMPT  
SubBasin AGUA FRIA  
Watershed AGUA FRIA RIVER  
Water Uses DOMESTIC  
Well Uses WATER PRODUCTION  
Discharge Method NONE  
Power NO POWER CODE LISTED

Intended Capacity GPM 0.00

Well Depth 150.00  
Pump Cap. 25.00  
Draw Down 0.00

Case Diam 8.00  
Case Depth 150.00  
Water Level 62.00  
Acres Irrig 0.00

Tested Cap 25.00  
CRT  
Log  
Finish STEEL - PERFORATED OR  
SLOTTED CASING

Contamination Site: NO - NOT IN ANY WQARF SITE

Comments ||CO||PO||PO#:

Current Action

Action Comment:

Action History

7/15/1978 755 WELL CONSTRUCTION COMPLETED  
Action Comment:





Arizona Department of Water Resources  
Groundwater Management Support Section  
P.O. Box 458 • Phoenix, Arizona 85001-0458  
(602) 417-2470 • (800) 352-8488  
www.water.az.gov

### Request to Change Well Information

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - check or money order for any required fee(s)
- Authority for fee: A.A.C. R12-15-151(B)(4)(a), A.R.S. § 45-113(B)

\*\* PLEASE PRINT CLEARLY \*\*

*COPIED  
MAILED  
10-28-04*

FILE NUMBER
WELL REGISTRATION NUMBER <b>55-629005</b>

#### SECTION 1. REGISTRY INFORMATION

<b>Well Owner</b> FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL <b>Bureau of Land Management</b> MAILING ADDRESS <b>21605 N. 7TH AVE</b> CITY / STATE / ZIP CODE <b>PHX AZ 85027</b> CONTACT PERSON NAME AND TITLE <b>Reference-3600 (620) AZA-32842</b> TELEPHONE NUMBER FAX	<b>Location of Well</b> WELL LOCATION ADDRESS (IF ANY) TOWNSHIP (N/S) RANGE (E/W) SECTION <b>7N 2E 5</b> 160 ACRE 40 ACRE 10 ACRE <b>B 1/4 D 1/4 B 1/4</b> LATITUDE LONGITUDE Degrees Minutes Seconds Degrees Minutes Seconds COUNTY ASSESSOR'S PARCEL ID NUMBER BOOK MAP PARCEL COUNTY WHERE WELL IS LOCATED <b>MARICOPA</b>
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<b>Type of Request (CHECK ONE)</b>		
<input type="checkbox"/> Change of Well Drilling Contractor (Fill out Section 2)	<input checked="" type="checkbox"/> Change of Well Ownership (Fill out Section 3)	<input checked="" type="checkbox"/> Change of Well Information (location, use, etc.) (Fill out Section 4)

#### SECTION 2. REQUEST TO CHANGE WELL DRILLING CONTRACTOR (\$10 Fee Required)

If drilling or abandoning a well, the Department must receive this request and issue authorization to the new drilling firm prior to the commencement of well drilling or abandonment.		<b>\$10 FEE</b>
<b>Current Well Drilling Contractor</b> FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL DWR LICENSE NUMBER TELEPHONE NUMBER FAX	<b>New Well Drilling Contractor</b> FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL DWR LICENSE NUMBER ROC LICENSE CATEGORY TELEPHONE NUMBER FAX	

#### SECTION 3. STATEMENT OF CHANGE OF WELL OWNERSHIP (\$10 Fee Required)

If this change pertains to more than one well and the names are the same, only one \$10 fee is required.		<b>\$10 FEE</b>
<b>Previous Well Owner</b> FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL <b>TUFF AMERICAN, INC.</b> MAILING ADDRESS <b>3782 S. 4000 W</b> CITY / STATE / ZIP CODE <b>W. VALLEY CITY, UT 84120</b> CONTACT PERSON NAME AND TITLE TELEPHONE NUMBER FAX	<b>New Well Owner</b> FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL <b>ARIZONA NATURAL GOLD EXCAVATION</b> MAILING ADDRESS <b>PMB 378, STE. CAREFREE AND RECLAMATION, INC.</b> CITY / STATE / ZIP CODE <b>PHX AZ 85085</b> CONTACT PERSON NAME AND TITLE <b>BILL C. WALDECK - PRESIDENT</b> TELEPHONE NUMBER FAX <b>623-465-2931 623-581-2987</b>	

#### SECTION 4. CHANGE OF WELL INFORMATION (No Fee Required)

<b>NOTE:</b> Applies only to wells that have already been drilled. For proposed wells, an amended Notice of Intent to Drill a Well must be filed.		<b>NO FEE</b>
EXPLAIN <b>DOMESTIC AND DUST CONTROL</b>		
I HEREBY CERTIFY that the above statements are true to the best of my knowledge and belief.		
TYPE OR PRINT NAME AND TITLE <b>Bill C. Waldeck</b>		SIGNATURE OF WELL OWNER <b>Bill C. Waldeck</b> DATE <b>11/11/04</b>

## Appendix C – VRM worksheets and viewshed analysis map

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SCENIC QUALITY RATING SUMMARY

Date OCTOBER 25, 2005

District PHOENIX

Resource Area HASSAYAM PA

1. Evaluators (names)

SCARBROUGH / RAGSDALE

SCENIC QUALITY RATING UNITS (1)	Landform (2)	Vegetation (3)	Water (4)	Color (5)	Adjacent Scenery (6)	Scarcity (7)	Cultural Modification (8)	Total Score (9)	Scenic Quality Rating (10)	EXPLANATION (11)
AZ NAT. GOLD SITE	3	3	0	3	1	3	0	13	B	<p>2. Steep Mesas (Williams Mesa, Indian Butte) to SW, Bradshaw mts. to W.</p> <p>3. Typical Sonoran desert vegetation diversity; saguaro cactus, palo verde, ironwood</p> <p>4. Absent</p> <p>5. Light color bands in steep walls of buttest mesas contrast with dk brn landforms</p> <p>6. Bradshaws, distant views of Hells Canyon Wilderness contribute to overall scenic quality</p> <p>7. Distinctive views, similar/common to south-central Arizona</p> <p>8. Wooden pole power-line; unimproved, dirt-surfaced roads</p>

INSTRUCTIONS

Form is used in conjunction with the Scenic Quality Inventory and Evaluation Chart.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SENSITIVITY LEVEL RATING SHEET

Date OCTOBER 25, 2005

District PHOENIX

Resource Area HASSAYAMPA

I. Evaluators (names)

SCARBROUGH / RAGSDALE

SENSITIVITY LEVEL RATING UNIT (1)	Type of User (2)	Amount of Use (3)	Public Interest (4)	Adjacent Land Uses (5)	Special Areas (6)	Other Factors (7)	Overall Rating (8)	EXPLANATION (9)
AZ Nat. Gold Site	M	H	M	M	H	-	M	<p>2. Multi-use recreation use (shooters, hikers, equestrians, ohv, lake visitors) - no known public concern over adjacent similar operations (AZCO mine, United Metro Materials)</p> <p>3. A high-use recreation area of Phoenix District</p> <p>4. Overall thought to be moderate for majority of users</p> <p>5. Adjacent land uses include primary access to (H) Lake Pleasant Regional Park, major transportation corridor (I-17), (C) utility corridors (nat. gas, power line), materials operations</p> <p>6. Black Canyon Trail, Lake Pleasant - maintenance of visual quality imp't to mgt of BCT (potential Nat. Historic Trail, State Trails system)</p> <p>7. Highly used OHV area</p> <p>DISTANCE ZONE: <u>FOREGROUND/MIDDLEGROUND</u></p> <p>SCENIC QUALITY: <u>B</u></p> <p>SENSITIVITY: <u>M</u></p> <p>DISTANCE ZONE: <u>FOREGROUND/MIDDLEGROUND</u></p> <p><u>CLASS III</u></p>

(Instructions on reverse)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

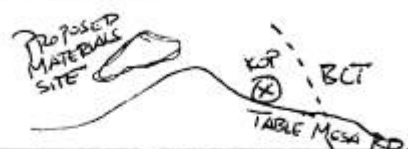
Date OCT. 25 2005

District PHOENIX

Resource Area ASSAYAMPA

Activity (program) MINERALS

SECTION A. PROJECT INFORMATION

1. Project Name <u>ARIZONA NATURAL GOLD</u>	4. Location Township <u>7N 8E</u> Range <u>2E</u> Section <u>5, 32</u>	5. Location Sketch 
2. Key Observation Point <u>-</u>		
3. VRM Class <u>III per interm guidance</u>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Bold, prominent, steep mesas & buttes (background), low rolling hills (foreground)	dotted, patchy, irregular	linear (power line on wooden poles)
LINE	bold horizontal (background), weak horizontal (foreground)	dotted, patchy, no line	vertical
COLOR	Lt. to DK Brown background, Lt. brn, reddish foreground	Lt. to DK Green	Lt. Brown
TEXTURE	Medium	Coarse	Smooth

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	Foreground - jagged gullies in hill, conical materials piles, background no change	same	Cylindrical fuel tanks, chain link fences, beams, conveyor, crusher - blocky, strong forms & lines
LINE	weak horizontal line in foreground gone - hill removed	same	vertical & horizontal
COLOR	background, no change, foreground whitish, light brn.	same	various - yellow, red,
TEXTURE	medium	same	smooth

SECTION D. CONTRAST RATING ☒ SHORT TERM ☐ LONG TERM

I. DEGREE OF CONTRAST		FEATURES												2. Does project design meet visual resource management objectives? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)		
		LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)						
		Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None			
ELEMENTS	Form		✓							✓	✓					3. Additional mitigating measures recommended <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
	Line			✓						✓				✓		
	Color		✓									✓				
	Texture				✓								✓			
														Evaluator's Names <u>SCARBROUGH</u> <u>RAGSDALE</u>		Date <u>OCT 25, 2005</u>



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SECTION D. (Continued)

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Comments from item 2.

1. See memo r.e. project

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Additional Mitigating Measures (See item 3)

1. Standard mining operating and reclamation procedures per policy.

